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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,566	03/29/2004	Sasha Paley	246/236	1230

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EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/810,566	<b>Applicant(s)</b> PALEY ET AL.	
	<b>Examiner</b> Joshua D. Schneider	<b>Art Unit</b> 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 20, 21, 24, 27, 28, 31, 32, 35-38 and 45-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31, 32 and 35-37 is/are allowed.
- 6) ☒ Claim(s) 20, 21, 24, 27, 28, 38, and 45-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/14/2006 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 31, 38, and 45-48 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 48 is objected to because of the following informalities: limitation (d) is followed by a period, and then an extra limitation, so either the final limitation or the first period must be eliminated. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not explained in the specification how multi-level LEDs can be used to represent commands of a second set to a microcontroller. No art rejection will be given on the claim, as it is not

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understood what the claim is trying to implement. It is also noted that the claim is listed as original though it has been amended previously

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 46 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. With regard to claim 46, it is not clear where the device to pass the second set of commands exists and how it is based on the specification. The specification teaches the use of multiple virtual sub-interfaces inside of a USB storage device, including multiple virtual devices that are implemented in a common physical device. It does not teach the enclosure of an alternative device in this drive. It is unclear what this extraneous device and who this device interacts, if at all, with the other virtual devices.

8. Claim 24 is rejected for incorporating the same indefinite subject matter as the independent claim upon which it depends.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claim 20, 38, 45, 47, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by the Applicant Admitted Prior Art (AAPA).

11. With regards to claim 45, the AAPA teaches a microcontroller for executing commands received from the host computer (Fig. 1, element 123); (b) a first device for passing to said microcontroller a first set of said commands received from any user of the host computer (Fig. 2, element 132); (c) a second device for passing to said microcontroller a second set of said commands received from any user of the host computer (Fig. 2, element 133); and (d) a USB interface for effecting an operational connection of the peripheral device to the host computer to receive said commands (Fig. 2, element 135); wherein said second device is a USB HID sub-interface of said USB interface (Fig. 2, element 120).

12. With regards to claim 20, the AAPA teaches (i) a mechanism for representing said commands of said second set to said microcontroller (Fig. 2, element 135); and (ii) a mechanism for representing results of said commands of said second set to the host computer (Fig. 2, element 135).

13. With regards to claim 38, the AAPA teaches (a) a microcontroller for executing commands received from the host computer (Fig. 1, element 123); (b) a first virtual device for passing said commands from the host computer to said microcontroller (Fig. 2, element 132); (c) a second virtual device, separate from said first virtual device, that supports autorun when the host computer detects a presence of said second virtual device in the peripheral device (Fig. 2, element 134) and (d) an interface for effecting an operational connection of the peripheral device to the host computer to receive said commands (Fig. 2, element 135); wherein said first and

second virtual devices are implemented in a common physical device that is a multi-LUN USB sub-interface of said interface (Fig. 2, element 124).

14. With regards to claim 47, the AAPA teaches (a) a microcontroller for executing commands received from the host computer (Fig. 1, element 123); (b) a first virtual device for passing to said microcontroller a first set of said commands received from any user of the host computer (Fig. 2, element 132); (c) a second virtual device for passing to said microcontroller a second set of said commands received from any user of the host computer (Fig. 2, element 133); and (d) a memory including a plurality of sectors (Fig. 1, element 121); wherein said first and second virtual devices are implemented in a common physical device (Fig. 2, element 124); wherein said first set of said commands includes write commands for writing data to respective designated sectors of said memory (inherent to memory writes); and wherein said common physical device is operative to pass to said microcontroller said commands of said second set received from any user of the host computer if said commands are embedded in respective said write commands for writing to a sector that is reserved for said commands of said second set (Fig. 1, elements 113, 124, and 141).

15. With regards to claim 48, the AAPA teaches (a) a microcontroller for executing commands received from the host computer (Fig. 1, element 123); (b) a first virtual device for passing to said microcontroller a first set of said commands received from any user of the host computer (Fig. 2, element 132); (c) a second virtual device for passing to said microcontroller a second set of said commands received from any user of the host computer (Fig. 2, element 133); and (d) a USB interface for effecting an operational connection of the peripheral device to the host computer to receive said commands (Fig. 2, element 135), wherein said first and second

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virtual devices are implemented in a common physical device (Fig. 2, element 124); and wherein said common physical device is a multi-LUN USB sub-interface of said USB interface (Fig. 2, element 131).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA).

18. With regards to claims 27 and 28, the AAPA fails to teach the sector is reserved statically or the sector is reserved dynamically. However, official notice is given that static and dynamic memory allocation is notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time of invention to combine static or dynamic memory reservation with the memory device of the AAPA in order to increase efficiency of memory use or simplify the memory allocation processing.

***Allowable Subject Matter***

19. Claims 31, 32, and 35-36 allowed.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M-F, 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDS



**KIM HUYNH**  
**SUPERVISORY PATENT EXAMINER**  
6/30/06